REMARKS

In the pending Office Action, the examiner rejects independent claims 1, 5, 12, 16, 21, 28, 32, 49, 67, 77, and 83 under §102 as anticipated by Papasakellariou (US2001/0053177), and rejects independent claims 8 and 24 under §103 as obvious over Papasakellariou in view of Eberhardt (US5754583). In response, the applicants offer the following remarks.

First, the applicants note that the finality of the pending office action is improper. The examiner asserts that the previous amendments necessitated the new grounds of rejection. However, the previous amendments simply incorporated originally filed dependent claim limitations with the originally filed independent claims. For example, the amendments to independent claim 1 incorporate the limitations of original dependent claim 3 (which originally depended from claim 1). Because the examiner should have searched the subject matter of all independent claims and all dependent claims as part of the initial examination process, the examiner cannot now say that amendments that incorporate such limitations necessitate a new search, and therefore, necessitate the new grounds of rejection. For at least this reason, the finality of the pending office action is improper and must be withdrawn.

The claimed invention reduces intersymbol interference in a symbol of interest by processing unknown symbols received over multiple paths of a multi-path channel. The independent claims despread the unknown symbols over at least one multi-path channel, determine cross-correlations between the different symbols based on code cross-correlations between spreading codes for the different symbols, and combine the despread symbols from different symbol periods based on the cross-correlations to reduce the interference (e.g., using weighting factors determined based on the code cross-correlations). It is important to note that the claimed invention uses the code cross-correlation based combining to reduce the interference. Further, it is important to note that the claimed invention does not require

knowledge of the information symbol values for the interfering symbols. In fact, the claimed invention explicitly relies on <u>unknown</u> interfering symbols.
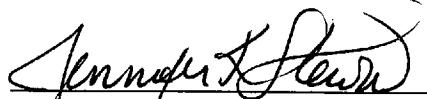
Papasakellariou describes an interference suppression method that performs subtractive interference cancellation after despreading but before RAKE combining (see ¶[0020]). In particular, Papasakellariou describes determining the interfering signals, multiplying code cross-correlations by each interfering signal's complex amplitude and information symbol, and subtracting the result from the output of the despreader associated with the desired signal to cancel interference (See ¶ [0009]). Thus, Papasakellariou relies on <u>known</u> interfering symbols and performs the interference cancellation <u>before</u> RAKE combining.

Each independent claim explicitly uses unknown interfering symbols and performs interference cancellation as part of a combining process (e.g., a RAKE combining process), where the combining process is based on code cross-correlations. Because the examiner relies on Papasakellariou for these teachings in both the §102 and §103 rejections, and because nothing in Papasakellariou teaches or suggests these limitations, the independent claims are patentably distinct from Papasakellariou. Thus, the applicants respectfully request reconsideration of all §102 and §103 rejections.

Should any issues remain unresolved, the applicants respectfully request that the examiner call the undersigned so that any such issues may be expeditiously resolved.

Respectfully submitted,

COATS & BENNETT, P.L.L.C.

Dated: 23 January 2008

Jennifer K. Stewart
Registration No.: 53,639

1400 Crescent Green, Suite 300
Cary, NC 27518

Telephone: (919) 854-1844
Facsimile: (919) 854-2084